**K-5 Math Lesson Plan**

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| **Teacher: Flick** | | | **Grade: 3** | | | **Date(s)**: LP1 August 27, 2012 |
| **Unit Title: Unit 1 -** Place Value with Addition and Subtraction within 1,000 | | | | **Corresponding Unit Task:** Taught prior to Performance Task 1; ***This lesson will mainly focus on number recognition and basic place value understanding.*** | | |
| **Essential Question(s):**   * How does place value understanding help me add and subtract numbers? * Why do I need to know multiple strategies to add and subtract numbers? * What strategies can I use to add and subtract multi-digit numbers? | | | | | | |
| **Materials/Resources** | | | | **Essential Vocabulary** | | |
| **Teacher:**   * Number word sentence strips * Vocabulary cards from C & I * Place value chart (optional) * Chart paper * enVisions TE Topic 1 * Parking Lot * Sticky notes * PSJ labels per student | | **Student:**   * GCS C&I Pre- Assessment * Mini-white board per student * Dry erase marker per student * Base Ten blocks * Place value mat per student * Standard form number card decks per group * Math binder * Problem Solving Journal (PSJ) * Planner | | | **Supporting vocabulary:** digit, value  **Essential vocabulary:** place value, ones, tens, hundreds | |
| **Learning Experience** | | | | | | |
| **8 Mathematical Practices:**  √ 1. Make sense of problems and persevere in solving them.  √ 2. Reason abstractly and quantitatively.  √ 3. Construct viable arguments and critique the reasoning of others.  √ 4. Model with mathematics.  √ 5. Use appropriate tools strategically.  √ 6. Attend to precision.  √ 7. Look for and make use of structure.  √ 8. Look for and express regularity in repeated reasoning. | **Common Core State Standards: 3.NBT.1 *(correlates to NCSCOS objective 1.01)*** Use place value understanding to round whole numbers to the nearest 10 or 100. | | | | | |
| **I Can Statement(s):**   * I can recognize numbers from 0 to 1,000. * I can recognize numbers displayed in standard form, word form, expanded form, and picture form. * I can demonstrate/model numbers using standard form, word form, expanded form, and picture form. * I can read numbers having one, two, three, and four digits. | | | | | |
| **Activating Strategy/Hook:**  **\*Prior to beginning the lesson, the GCS C&I Pre-Assessment for Unit 1 will need to be administered to the students.**  (5-10 minutes)  Provide students with mini-white boards and markers. Teacher will hold up sentence strips with number words written on them (begin with ones, moving to tens). Students will identify the number word by writing the number in standard form on their white boards and holding it up. Visually assess accuracy. (This exercise will also provide an opportunity for you to determine if a spelling list of number words needs to be incorporated into your lessons this week.) | | | | | |
| **Teacher Directed:**  Tell the students: *You know how to read and write numbers having one-digit and two-digits, such as 7 or 85. Over the next few days, you will learn to read and write numbers having three-digits.* Refer to the supporting and essential vocabulary, using the vocabulary cards and displaying them for the duration of the unit. Show students Base Ten models for ***ones***, ***tens***, ***hundreds***. Emphasize that: *The term* ***place value*** *tells you the value of each digit in a number according to its position in the number*.  Write 345 on the white board. Ask: *How can I use Base Ten blocks to show the number I have written on the board?* Draw a place value chart on the board or display one on the Elmo showing hundreds, tens, and ones. Plug in the number 345. Thinking aloud and placing Base Tens in appropriate columns, say: *I know that I need five ones.* [Place five one units on the mat.] *I know that I need four rods/tens.* [Place four rods on the mat, counting to make sure that there are ten units in each rod, and counting up.] *I know that I need three hundreds/flats.* [Place three flats on the mat, again counting to show that there are a hundred ones, or ten tens in each hundred.] *The chart shows the value of the 3 is 300.. 4 is 40… 5 is 5.*   |  |  |  | | --- | --- | --- | | HUNDREDS | TENS | ONES | | 3 | 4 | 5 | | (300) | (40) | (5) |   So: 300 + 40 + 5 = 345 | | | | | |
| **Guided Practice:**  Provide cooperative pairs/groups with Base Ten blocks and a place value mat. Tell students it is their turn to model numbers using Base Tens. Write the number 172 on the board. Allow students time to work in their cooperative pairs/groups. Circulate and monitor solutions, asking students to explain them or explain any conflicts in finding a solution. As cooperative teams have displayed the Base Ten model for 172, challenge them to write it in other ways again allowing them time to collaborate while you circulate. (Best case scenario, students will represent 172 in picture, word, standard, and expanded form.) Allowing students to come to the Elmo to “teach”/explain how they modeled 172 with Base Tens.  Continue working in cooperative groups using as many examples as necessary, visually assessing student progress and encouraging mathematical reasoning discussions. If necessary, guide students through another number (216). Other examples of numbers can be found in Topic1 TE of enVisions pages 4-5.  In cooperative groups of about 4 students, provide groups a stack of index cards with numbers written on them. Students will keep the stack of cards face down in the middle of the group. The “leader” will rotate clockwise. Student A will first be the leader, drawing a card and observing other students. The other students in the group will build the number using their Base Tens. When students are finished, the leader will assess the group giving a point to students with correct answers and explaining why that particular answer is correct. Next, Student B will be the leader, then Student C, Student D, and then back to Student A. | | | | | |
| **Independent Practice:**  Write the following numbers on the board: 56, 479, 370, 58, 291  Students will work independently in their math binders to draw models that represent each number. Base Ten blocks should still be available if students choose to manipulate the numbers before they draw the picture representation. | | | | | |
| **Closing/Summarizing Strategy:**  Review the lesson: Discuss the first three “I can” statements listed above with only picture form. Have students discuss their feelings (Think-Pair-Share): *Can you? Why or why not? What do I need more practice on?* Students will write any questions or areas needing more assistance in the “parking lot”.  Assign homework: Problem Solving Journal (PSJ) problem:  *Think about the number 589.*   * *Which digit has the greatest value? Explain.* * *Show the number in standard form, word form, expanded form, and picture form.* | | | | | |
| **Differentiation Strategies** | | | | | | |
| **Extension** | | | **Intervention** | | | **Language Development** |
| *How is the tens place related to the ones place?* [The value is ten times as great.]  *What place has a value ten times as great as the tens place?* [Hundreds]  Provide greater numbers for these students to manipulate using picture form and Base Tens. | | | Scale back, representing numbers with one digit, then moving onto two digits, and finally three digits.  Begin with ***only*** standard and picture (Base Ten) forms. In subsequent lessons, move to expanded form. | | | Scale back, representing numbers with one digit, then moving onto two digits, and finally three digits.  Begin with ***only*** standard and picture (Base Ten) forms. In subsequent lessons, move to expanded form. |
| **Assessment(s):**   * Pre-Assessment given in the beginning of the block. * Visual assessments on-going throughout the lesson. * Independent activity in math binders. * Student self -assessment of the lesson and feedback in the parking lot. | | | | | | |
| **Teacher Reflection:** (Next steps?) | | | | | | |